

REMARKS

Upon entry of the foregoing amendments, claims 15-18 and 20-24 are pending. Claims 15, 21 and 22 have been amended. Additionally, claim 24 has been newly added. Support for the amendments and new claim can be found throughout the specification as originally filed. Accordingly, no new matter has been added.

Reconsideration of the pending rejections is respectfully requested in view of the above amendments and the following remarks.

I. Restriction Requirement

Applicants confirm the election without traverse of claims 15-23. Claims 1-14 are cancelled without prejudice and Applicants reserve the right to prosecute these patentably distinct claims in a divisional application.

II. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 21 and 22 have been rejected under 35 U.S.C. § 112, second paragraph. The claims have been amended to delete the word “type,” and as amended, are believed to overcome the objections raised in the Office Action.

III. Rejections Over The Prior Art

Claims 15-19 and 21-22 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Nos. 5,534,325 (Jorder) and 4,750,443 (Blaustein).

Claim 20 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Nos. 5,534,325 (Jorder) and 4,750,443 (Blaustein) as applied to Claim 15, and further in view of U.S. Patent No. 6,383,623 (Erb, Jr.).

Claim 23 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Nos. 5,534,325 (Jorder) and 4,750,443 (Blaustein) as applied to Claim 15, and further in view of U.S. Patent No. 4,865,906 (Smith Jr.).

These rejections are respectfully traversed.

The Applicants' invention is a fireblocking aircraft seat cushion covering comprising a fireblocking fabric made with a nonwoven fabric layer created by the process of needlepunching to form a highly consolidated product (p. 8 paragraph 29). In addition to being used to create the nonwoven fabric layer, needlepunching is also used to attach a woven scrim to the nonwoven fabric layer (see e.g., p. 9 paragraph 33). As amended, the claims recite that the nonwoven fabric and the woven scrim are attached by mechanical entanglement. As a result of the high degree of consolidation and the method of incorporating a scrim without weaving a stitch through the fabric, the fabric of the invention is characteristically low profile, yet easily draped. These characteristics make the fabric suited for use as a fire blocking layer in aircraft seats, as well as automotive, bus, rail or recreational vehicle applications. Covers according to the present invention are readily distinguished from the almost paper-like, relatively stiff and light weight covers of the cited prior art.

The fireblocking fabric disclosed by Jorder comprises a nonwoven fabric created with high-energy water jets that results in hydroentanglement of the fibers (col 2, ln

55-63), and the mineral filler, vermiculite (col. 2 ln 1-5). One of skill in the art recognizes that the use of hydroentanglement results in a nonwoven fabric that has a limited mass per unit area (Jorder discloses and claims 100g/m² to 210 g/m²). A greater mass per unit area would require increased water pressure beyond what is readily feasible and ultimately would cause the pins of the apparatus to be broken. In fact, whether hydroentanglement could be used to produce the maximum weight per unit area given by Jorder is questionable.

The distribution of vermiculite particles throughout the entire volume of the nonwoven fabric is further an important element of the fireblocking fabric disclosed in Jorder (col. 2 ln 5-16). The fireblocking fabric of Jorder et al. also comprises a woven reinforcement, anchored into the nonwoven fabric in the form of a tricot weave (col. 2 ln 32-36).

Blaustein discloses that a fireblocking fabric suitable for use in an aircraft seat cushion can be covered with an outer woven dress fabric or other material, such as leather. Blaustein also discloses that the dress fabric be fastened to the cushions with hook and loop fasteners.

The Examiner rejected pending claims 15-18 and 21-22 as being obvious over Jorder et al. in view of Blaustein, i.e., on the grounds that Jorder discloses the fireblocking fabric component of the Applicants' invention and that it would have been obvious to one having ordinary skill in the art to use the dress fabric and hook- and -loop fasteners described in Blaustein on the seat cushion of Jorder to create the Applicants' seat cushion. Applicants respectfully traverse because Jorder does not disclose the fireblocking

fabric of the amended claims, for several reasons. As amended, the present claims recite a material having greater mass per unit area than shown in Jorder. Note that all of the Examples of the present disclosure contain a mass per unit area of greater than 210 g/m², which provides support for the claimed range when taken with the range of 3 - 14 oz/gd² of original claim 19. The use of barbed needles in the present invention to mechanically entangle the fibers into a nonwoven fabric allows for a greater mass per unit area. In contrast, the fibers of the nonwoven layer of Jorder are hydroentangled with high-energy water jets. As noted, the use of high-energy water jets results in a limited mass per unit area.

Second, the present invention does not require vermiculite to be dispersed throughout the nonwoven fabric. In contrast, Jorder discloses the distribution of vermiculite throughout the nonwoven fabric as important for flame retardation. At least for these additional reasons, dependent claim 24 should be found allowable.

Third, the woven scrim of the present invention is mechanically entangled with the nonwoven layer. In contrast, the reinforcing fibers (equated by the Examiner to the woven scrim) disclosed in Jorder are woven with the nonwoven layer. As discussed above, the use of needlepunching, as opposed to weaving techniques with which the stitching goes through the fabric, results in greater malleability of the fabric and allows for easier draping. In conclusion, the fireblocking fabric of the present invention is easily distinguished from that of Jorder. Since Jorder does not disclose a material element of the present invention, and Blaustein cannot overcome the deficiencies of Jorder, Applicants

respectfully request the Examiner withdraw the rejection of claims 15-18 and 21-22 as being unpatentable over Jorder in view of Blaustein.

The Examiner rejects claim 20 as being unpatentable over Jorder and Blaustein in further view of Erb, Jr. Erb, Jr. describes treating insulation (containing a fireblocking layer) with a PTFE polymer emulsion to make it water repellant. Applicants submit that the secondary reference does not disclose a seat cushion covering having the claimed qualities and therefore does not overcome the deficiencies of Jorder. Moreover, Applicants respectfully submit that Erb discloses nothing about the suitability of a fluoropolymer waterproofing treatment on a seat cushion covering. In making a restriction requirement, the Examiner implicitly recognized that the cushion covering and the fabric per se are distinct. Thus, without motivation to make the express combination alleged by the Examiner, the teaching of Erb would not obviously apply to Jorder. It would not have been obvious to apply a treatment used to make thermal insulation water repellant to a seat cushion covering. Consequently, Applicants request the Examiner to allow claim 20.

Claim 23 is rejected as being unpatentable over Jorder et al, and Blaustein et al., and in further view of Smith, Jr. Applicants respectfully disagree. Smith, Jr. describes a flame retardant yarn blend for use in protective clothing worn by personnel who are frequently in close quarters with flame, heat and flash (e.g., pilots, firefighters, steelworkers, and, etc.). All of the fabrics disclosed are either woven or unconsolidated. Thus, even a combination of those references would not make a prima facie case of obviousness. Applicants again assert that the seat cushion covering of the present invention is patentable over Jorder in view of Blaustein for the reasons stated above.

Additionally, Applicants assert that the addition of Smith does not overcome the deficiencies of the primary references. Consequently, Applicants request the Examiner to allow claim 23.

Claim 24 is presented to specifically recite a preferred embodiment of the invention. The use of vermiculite in the fireblocking fabric of Jorder is undesirable as the process of dispersing vermiculite is difficult, costly, and hard to control. Additionally, vermiculite particles may become loose after extended seat wear, and create discomfort as they break through the dress cover. Since Jorder specifically points out the importance of vermiculite in preventing the penetration of flames, Applicants assert that the lack of a mineral filler in the presently disclosed fireblocking fabric is indicative of the nonobviousness of the present invention. *See In re Edge*, 329 F.2d 869 (C.C.P.A. 1966)(finding claims unobvious over the prior art because although an element of the prior art was eliminated, the function of the eliminated element was retained). Accordingly, Applicants respectfully request allowance of claim 24.

In view of the above amendments and remarks, Applicants submit that all of the rejections are now overcome and the claims are now in condition for allowance. Reconsideration and allowance of this application are earnestly solicited.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our below listed address.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Brendan Mee", is written over a horizontal line.

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